



Pneumococcal Disease

What is Pneumococcal Disease?

Pneumococcal disease is an infection caused by the bacteria *Streptococcus pneumoniae* that can affect different parts of the body and cause a variety of illnesses. Some infections are mild, such as ear and sinus infections. Some infections can be more serious, like pneumonia or meningitis.

Pneumococcal disease is spread from person to person through coughing, sneezing and close contact. Some people are “carriers,” which means they carry the bacteria in their nose or throat but don’t have any symptoms and don’t feel sick. Carriers can then spread the bacteria to others without knowing it.

Pneumococcal disease is vaccine-preventable.

What are the symptoms and complications of pneumococcal disease?

Pneumococcal disease can cause many different kinds of infections. The symptoms will differ depending on the part of the body that is infected. It is also possible to have more than one infection at the same time.

Pneumococcal disease can have a combination of the following symptoms:

- Fever and chills
- Shortness of breath or difficulty breathing
- Cough
- Chest pain
- Stiff neck
- Confusion or disorientation
- Sensitivity to light (photophobia)

Serious Pneumococcal infections can lead to complications including:

- Inflammation around the lungs (empyema) and heart (pericarditis)
- Blockage of airway allowing air into the lungs (endobronchial obstruction)
- Hearing loss
- Loss of limbs
- Kidney failure
- Damage to brain, lungs or heart

Early diagnosis and treatment for serious pneumococcal infections are very important to avoid long-term complications.

Vaccines are the best way to prevent pneumococcal disease.

Who should get the pneumococcal vaccine?

Your Health. Your Questions. Your Care.

Vaccination recommendations are designed to guide care, but every person and every family is different. We encourage you to have an **open conversation with your healthcare provider** about your health history, concerns and questions. Together, through **shared clinical decision-making**, you can create a vaccination plan that is informed, personalized and right for you or your child.

Pneumococcal disease can cause illnesses ranging from ear and sinus infections to pneumonia, bloodstream infections and meningitis. Anyone can develop pneumococcal disease, but **young children, older adults** and **people with certain health conditions** are at increased risk of serious illness.

There are two kinds of vaccines used in the United States to help protect against pneumococcal disease:

- Pneumococcal conjugate vaccines (PCV15, PCV20 or PCV21)
- Pneumococcal polysaccharide vaccine (PPSV23)

The specific vaccine and number of doses a person needs depend on their age, health conditions and previous pneumococcal vaccinations and should be decided with their healthcare provider through shared clinical decision-making.

The CDC recommends pneumococcal vaccination for the following groups:

- **Infants and young children**

All children younger than 5 years should receive a four-dose series of PCV15 or PCV20. The doses are routinely given at:

- 2 months
- 4 months
- 6 months
- 12 through 15 months

Children younger than 5 who missed a dose or started the series late should receive catch-up vaccination. The number and timing of doses will depend on the child's age and vaccination history.

- **Children and adolescents with certain risk conditions**

Children ages 2 through 18 years with certain medical conditions or other risk factors may need additional pneumococcal vaccination. The recommended vaccine and number of doses depend on the child's health condition and previous vaccination history.

- **Adults ages 50 years and older**

Adults ages 50 years and older who have never received a pneumococcal conjugate vaccine, or whose vaccination history is unknown, should receive PCV15, PCV20 or PCV21.

- When **PCV15** is given, it should generally be followed by one dose of PPSV23 one year later.
- When **PCV20 or PCV21** is given, an additional dose of PPSV23 is not recommended.
- **Adults ages 19 through 49 years with certain risk conditions**

Adults younger than 50 with certain medical conditions or other risk factors may also need pneumococcal vaccination. Recommendations vary depending on the person's condition and previous vaccination history.

Adults who previously received PCV7, PCV13 or other pneumococcal vaccines should speak with a healthcare provider to determine whether they need another dose. Some adults ages 65 and older who previously received both PCV13 and PPSV23 may choose to receive PCV20 or PCV21 after discussing the potential benefits with their healthcare provider.

Is the pneumococcal vaccine safe?

Pneumococcal vaccines have a strong safety record and are continually monitored for safety. Most people do not experience serious problems after vaccination.

Common side effects are generally mild and may include:

- Pain, redness or swelling where the vaccine was given
- Fever or chills
- Tiredness
- Headache
- Muscle or joint pain
- Decreased appetite
- Fussiness in young children

These reactions usually improve on their own within a few days. Severe allergic reactions are rare.

Flu season is a good opportunity to check whether both your flu and pneumococcal vaccinations are up to date. Having the flu can increase the risk of developing pneumococcal disease.

Pneumococcal vaccines protect against many of the types of bacteria most likely to cause serious disease, but they do not prevent every case. A vaccinated person may still develop pneumococcal disease, but staying up to date with recommended vaccinations provides the best protection.

Additional Resources

- [Pneumococcal Symptoms and Complications](#) (CDC)
- [Pneumococcal Vaccination](#) (CDC)
- [Pneumococcal Risk Factors and Transmission](#) (CDC)